

CALIFORNIA STATE PARKS – HISTORIC ORCHARD ASSESSMENT TRAINING VIDEO

TRANSCRIPT

NARRATOR: Just like an agricultural landscape or designed landscape, historic orchards reflect the passage of time. Orchards may be identified as historic sites, historic districts, or as contributing features to sites or districts and are historically significant cultural landscapes in their own right, which also serve as repositories of rare or unusual fruit varieties. The historic orchards remaining in our state parks are worthy of preserving -- they do not exist anywhere else because of changing agricultural practices.

NARRATOR: In March of 2010, California State Parks and the National Park Service conducted an historic orchard management workshop at the Sonoma Developmental Center Orchard located at Jack London State Historic Park.

NARRATOR: This is one of the few remaining historic orchards in California that was part of a self-sustaining farm colony. This orchard was planted on the hills behind the Sonoma State Hospital between 1908 and 1912. Nearly 100 acres of orchards were maintained by patients and employees until the mid-1960s. The orchards, together with the hospital dairy farm, piggery, poultry house and vegetable garden, allowed the institution to remain virtually self-sufficient for several decades. The Sonoma State Hospital orchard and similar orchards at the Napa State Hospital and the Metropolitan State Hospital were closed in the 1960s as patient populations began to decline and hospital officials could no longer maintain the orchards. Today, many of these agricultural landscapes have been lost due to the conversion of the land for other uses.

Kimball Koch, National Park Service, Historical Landscape Architect: “This orchard represents literally a vision back into the past, into the early 1900s as to how agriculture was absolutely integrated into the life of the people living and working here. This orchard represents something very special because it is one of those tangible links to how this property was managed, how people lived, how they incorporated it into their life their work, and into to at that time considerations for rehabilitation of patients as well.

NARRATOR: In general, the goal in working with historic orchards is to create a healthy environment that will prolong the life of the trees. Because we are dealing with living plant materials that have a limited life span, the first step is to assess where the trees are in their life cycle and determine their condition: good, fair, poor, or dead.

NARRATOR: In this video, we show you how to assess historic orchards and demonstrate some commonly used stabilization techniques.

Susan Dolan, National Park Service, Historical Landscape Architect: Different species have different longevities. So we can prolong the life of trees. If we can get to fair condition, we can retain at fair condition for a long time, and if we are at good condition, we are only confronted with the natural longevity of the tree as our limit. But if we are in poor condition, we are probably looking at within a decade most of what you see will be gone.

NARRATOR: To establish the condition of your historic orchard, use an assessment form to document the condition of each tree. Here is an example of a form you could use. It divides the trees into five zones: the orchard floor, the root system, the trunk base, the main trunk, the canopy, and the area above the canopy. Each zone has specific inspection factors to consider when determining the condition of the tree.

Susan Dolan: When we begin this inspection we look at various zones to inspect. All of that is to train our eyes to look beyond perhaps just the canopy which is what attracts our eyes immediately.

Zone zero -- that's the orchard floor. It is very difficult here to see the orchard floor. We often find accumulated debris -- woody debris, piles and piles of brush that's been cut and slash that has been left on orchard floors.

Sometimes we find gopher mounds generally throughout the orchard floor, sometimes we find drainage issues, we have ponding, pooling water. Or excessively drained areas.

Zone One is the root system, so it is the ground within the drip line, from the drip line at the edge of the canopy in towards the base of the trunk. That is the root system and that is the Zone One that we are referring to here. And the inspection factors that we want you to look for and check any that apply are root damage. Within the drip line is where you would look for early fruit drop, which can be indicative of various problems, drought and pests and diseases. We might see exposed roots, above the ground. That would be important to note.

Zone Two is the base of the trunk, right down low, near the trunk where the graft union is.

So the inspection factors we are looking for are loss of bark -- girdling, where there's a whole complete ring or loss of bark, you might see cavities right down at the base of the trunk, very important to note. Sometimes we might have lost a very low scaffold limb, leaving a cavity behind. Sometimes an animal has created a cavity, right at the base of the trunk.

Moving on to the third Zone, now we actually get to the main trunk and for us of course, we are just dealing typically with about a three-foot tall trunk. So it's the trunk up to the scaffold limbs and here we're looking for unbalanced scaffolds, meaning we have more growing in one direction than another. There are reasons that the center of gravity is not sort of equal -- that's one side or another. Note if you have an unbalanced scaffolds. If we have a lot of moss and lichen cover that should be noted. And again, if we have a lot of deadwood we will note that if we have deadwood emanating from the main trunk.

Zone Four the canopy of the tree. Look for dieback of terminal shoots -- note that if you see that. If we had foliage we'd be looking to see if there was any discoloration. This could be browning, it could be splotching, it could also be sort of chlorotic or faded yellowed foliage too.

Now you might be surprised that there is still one more zone – Zone Five. Often we have problems above the canopy because of encroachment. And so above the canopy we may find encroaching vegetation and over shading.

Sum all of this up with one label. Are we talking Good, Fair, Poor or Dead, and check what applies.

NARRATOR: Assessment gives you a good overall understanding of the condition of the orchard as well as of the individual trees. This information can be used to develop a stabilization plan, which contains guidelines for the preservation of the orchard until such time as a treatment or management plan can be adopted.

Susan Dolan: Orchard stabilization plans, a plan to intervene to prevent the deterioration of condition and an orchard management plans which are the documents that guide the cyclic activities over time that will retain or improve the condition of the orchard.

An orchard treatment plan is one that is going to prescribe a blueprint vision for the future of the orchard – a goal that we will attempt to attain, and then preserve through maintenance activities.

GRAPHIC – SECRETARY OF THE INTERIOR STANDARDS

And you’ve probably heard of the terms Preservation, Restoration, Rehabilitation, Reconstruction, those are treatments – they prescribe a blueprint vision and that’s what the orchard treatment plan does.

NARRATOR: If you are going to do work in a State Park historic orchard, whether it is stabilization or implementation of a treatment plan, you will need to do some form of project review to comply with the California Environmental Quality Act, and Public Resources Code Section 5024.

Marianne Hurley, California State Parks Historian: We can do stabilization without having a formal treatment plan, already devised. The actual stabilization is still considered a project even though it is considered a maintenance project, but the first time that stabilization is initiated, we actually should have a project review to make sure because, even in stabilization, we’re using tools, we’re doing interventions. We’re actually affecting the landscape and so all these activities could have a negative affect. And so therefore it should be reviewed for best practices for historic properties.

NARRATOR/ Stabilization includes steps to improve the condition and prolong the life of the trees. Pruning can be done in the winter or the summer, to achieve different objectives.

GRAPHIC – WINTER PRUNING

Susan Dolan: Winter pruning promotes vigor. Remove dead and diseased limbs as part of stabilization but crossing limbs we remove them as part of preservation maintenance to

really encourage a tree canopy to have the scaffold and secondary branches moving toward the exterior.

GRAPHIC – SUMMER PRUNING

Susan Dolan: Summer pruning reduces tree vigor. Summer is really the time we focus on the removal of water sprouts. The waterspout is really draining the vigor of the tree. And we see them expressed in the summer

Pruning shears, the first in our tool kit, should be used on material sized up to the diameter of a finger. Beyond that you are exceeding the capacity of the tool was designed to do.

Loppers can be used on material up to an inch in diameter.

Pruning saw, this one has a nice double blade to it, both push and a pull. You'll find that most of your saws are pull saws. These are really only useful for material up to 3 inches in diameter.

NARRATOR: It's important to clean your tools between trees to avoid passing pathogens and disease. And make sure the cuts you make are clean without loose or rough edges.

Kimball Koch: So there's a whole range of values that have to be considered whenever you are looking at historic preservation issues and I think one of the things we try to do through this type of planning effort is to identify all of those issues, bring them to the table, have a discussion with the professionals as it relates to their concerns and needs and then try to craft a solution that meets multiple objectives while still recognizing that one of the primary values of this resource, this orchard, is its historic qualities.